10-Gbps duobinary-4-PAM for High-Performance Access Network

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Publication date:
2015

Document Version
Publisher's PDF, also known as Version of record

10-Gbps duobinary-4-PAM for High-Performance Access Networks

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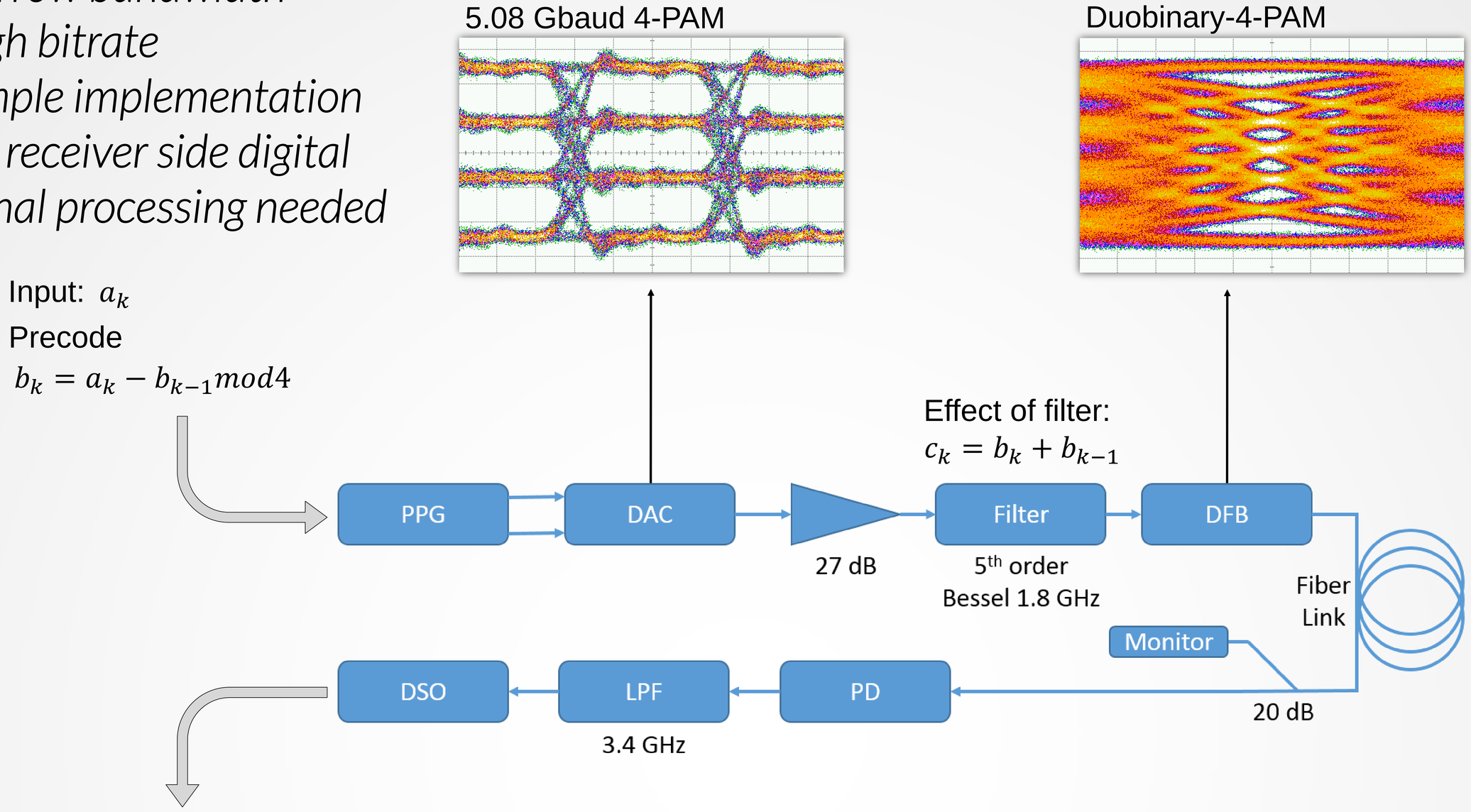
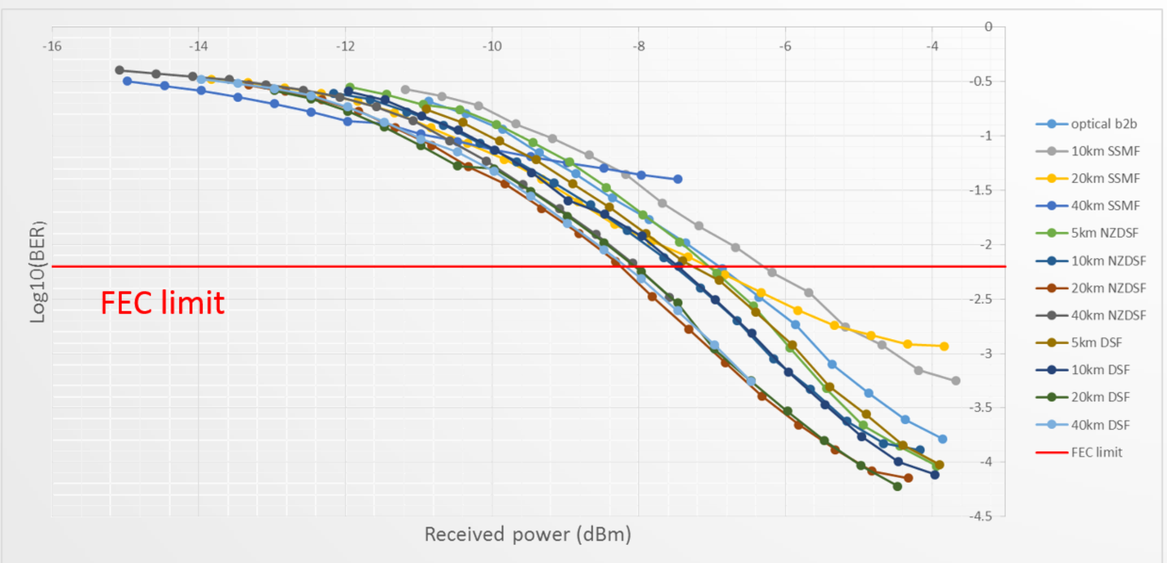
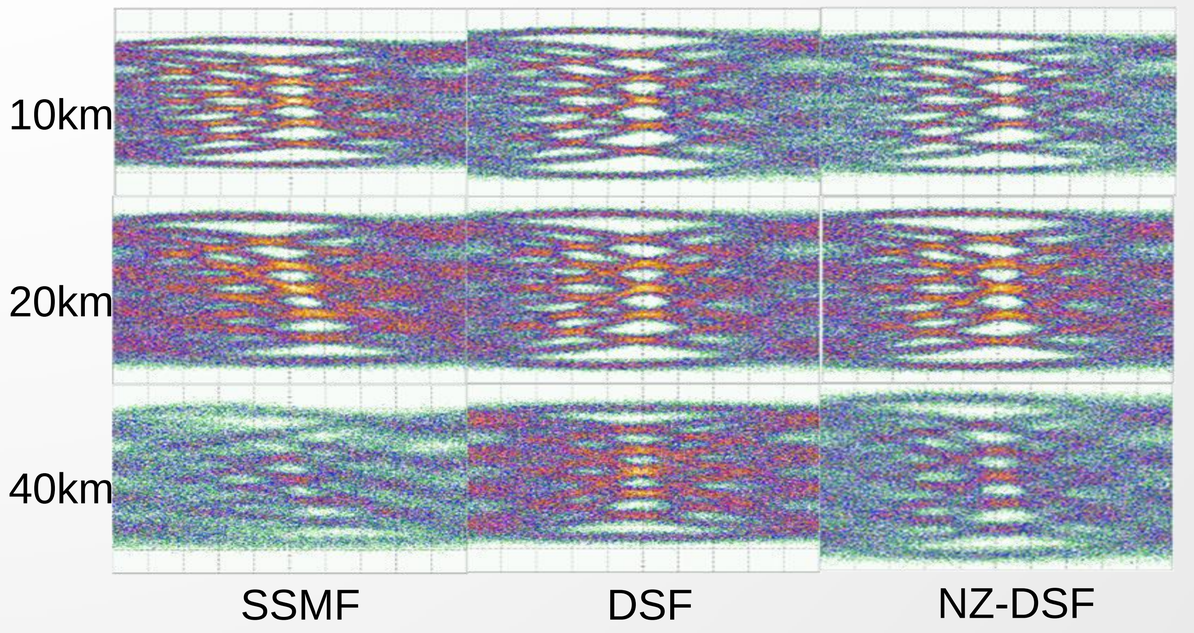
Duobinary-4-PAM:

- *Narrow bandwidth*
- *High bitrate*
- *Simple implementation*
- *No receiver side digital signal processing needed*



Results





Advantages

- *Very simple transmitter and receiver*
- *Half the spectrum of 4-PAM*
- *Robust transmission performance*

Drawbacks

- *Receiver sensitivity penalty*
- *Short sampling window*
- *Dispersion sensitive*

Conclusion:

Duobinary-4-PAM allows transmission of 10Gbps signals over 2.5GHz equipment.
Useful for limited bandwidth applications, e.g. Radio-over-fiber

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